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Capital Budeting Techniques Used In Sme's: An Empirical Study In Indian Financial Market.

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ABSTRACT:

Capital budgeting decisions are very important for financial managers since they determine the choice of investment projects that will affect company value. The adoption of the appropriate capital budgeting tools provides managers with both the processes and techniques required to make decisions that will enhance the organization's resource base while improving its ability to serve its members and evaluate effectiveness of its investments.

The general objective of this study was to assess the capital budgeting techniques adopted by Small and medium sized enterprises in India. The study had three specific research objectives including: to examine the extent of usage of capital budgeting techniques in Indian small and medium sized enterprises (SMEs); To identify the factors influencing on the choice of capital budgeting techniques in SMEs; Methods of capital budgeting used for evaluating an investment proposal in India.

This study applied a descriptive study design. Data was obtained through a survey of registered businesses ranging from small to medium businesses. A sample size of 100 firms was selected from a total population of 300. Primary data was collected using a questionnaire. Data analysis was done using SPSS and Microsoft Excel to generate quantitative reports.

Key Words: **Capital Budgeting, SMEs, NPV, IRR, Payback Period, ARR, Risk**

1. INTRODUCTION

Capital Budgeting is the planning of long-term financial projects relating to investments funded through long term sources of capital. Capital budgeting is a decision-making process that facilitates managers to evaluate and identify projects that are beneficial to the company. It refers to the process by which a firm determines where it should apply its comparatively limited financial resources.

The firm's investment decision would generally include Expansion, Acquisition, Modernization and Replacement of the long-term assets. It is the most important task for managers.In today's highly competitive business environment long-term capital investments have become a critical issue. Organizations are still making efforts to understand suitable capital budgeting techniques. The importance has been given to capital investment for the creation of shareholder wealth for individual firms. The basic objective of financial management is the maximization of the shareholders' wealth by focusing on three decisions which are capital budgeting decisions, capital structure decision and dividend decision. Most of the scholar and practitioner opine that although three decisions are important, firm success and survival ultimately depend on a right investment decision because a

good investment decision remains good business even though bad finance taken; on the contrary, a bad investment decision will be a wrong decision even with best finance policy . A sound capital budgeting decision is very critical for a firm because it is aligned with the firm's primary objective (wealth maximization), and it requires a substantial amount of resource and long-term commitment. Once the decision has been made, the process cannot be manipulated without incurring losses .

According to "I.M. PANDEY" has defined "capital budgeting- is the decision making process by which a firm evaluates the purchase of major fixed assets including building, machinery and equipment".

According to "Hampton-John"."Capital budgeting is concerned with the firm's formal process for the acquisition and investment of capital."

According to "Charles T" has defined capital budgeting as "Capital Budgeting is long term planning for making and financing proposed capital outlays."

Firms continually invest funds in assets, and these assets produce income and cash flows that the firm can either reinvest in more assets or pay to the owners. These assets represent the firm's capital. The process of investing in assets is called capital investment. Managers must evaluate a number of factors in making investment decisions. Not only does the financial manager need to estimate how much of the firm's future cash flows will change if it invests in a project, but the manager also evaluate the uncertainty associated with these future cash flows (Peterson & Fabozzi, 2002). Furthermore capital budgeting practice has become one of the fundamental criteria for a company planning to undertake an investment. It is one of the most important decisions that face the financial managers today; these decisions shape the future of the company. The process of capital budgeting should be done taking in to consideration the firm's strategic plan.

Capital budgeting practices are the most vital component of financial management and one of the most widely investigated topic in corporate finance literature.

Majority of the studies investigating the capital budgeting practices among surveyed firms are from developed economies followed by emerging economies [e.g. the USA , Canad, Japan , the UK , India and Sri Lanka.

2. Review of Literature

Porwal L S (1976) made a comprehensive study on capital budgeting practice of 52 Indian companies. It covered qualitative, quantitative, organizational and control aspects of capital budgeting. The study revealed that ARR was preferred method for evaluation of existing product lines; however, IRR was preferred method for appraisal of new product lines. The study revealed that 36% of companies used IRR for appraisal of capital projects proposing investments in new product lines and 43% companies used ARR in case of selecting projects in existing product lines. Payback Period remained as second most preferred method due to its simple calculations.

The corporate houses ascribed factors like uncertainty in supply of raw-material and uncertainty in government policy as reasons for project risks. For handling risk the firms applied shorter 'Payback Period' and higher 'discounting rate'. Most of the corporate houses used rate higher than WACC for the cut-off rate for discounting.

Bansal (1986) surveyed the process of capital budgeting as well as the tools and techniques of evaluation. On the basis of responses received from large number of Indian manufacturing companies, public and private, he reported the popularity of ARR both for expansion and new product lines. He found Payback Period as the most important secondary method. For risk adjustment, majority of the companies used traditional methods of Shorter Payback Period and higher discounting rate. While surveying capital budgeting process, Bansal (1986) noted that "legal requirements, competitive position, employer-employee relations and community relations were important qualitative considerations" at the early stage of project formulation. As a part of project

planning and control firms used techniques such as PERT, CPM and project audit. Over 50 percent companies were seen to undertake post completion audit of capital expenditure proposals.

Pandey I M (1989) conducted a study on capital budgeting techniques of 14 medium and large sized Indian companies and found that Payback Period method was most widely used method of financial appraisal followed by IRR and NPV. All companies except one were found regular users of Payback Period. In majority of the cases payback period was within the range of 3 to 5 years. Two-thirds of the companies were found using IRR, while the proportion for NPV stood at only two-fifths of the companies. The author observed that the executives were not duly familiar with the Discounted Cash Flow methodology. For incorporating risk analysis the companies mostly used Sensitivity Analysis and conservative forecasts. The study reflected that the firms did not discard any profitable investment for want of fund; in some cases the investment had to be delayed for failure of finishing mobilization of fund in time.

Sahu P K (1989) studied the practice of capital budgeting techniques of companies in Orissa. From the study of a sample of 15 companies he found that companies financed routine investments through internal sources of funds, whereas in case financing growth investments the companies used external sources of funding. He found that traditional PBP and ARR were the most preferred methods to the companies compared to scientific DCF methods such as Internal Rate of Return and Net Present Value.

Purohit Lall and Panda (1994) conducted a study on 100 non-financial companies listed on BSE. For financial appraisal four methods such as Payback Period, ARR, IRR and NPV were prevalent. However, they found that PBP and ARR were the preferred methods due to their simplicity. They also noticed that firms used internal finances for routine investments, while for growth and new project they used external finances.

Jain, Jain and Tarde (1995) conducted a study on 64 non-financial companies listed on BSE. They noticed nearly fifty percent companies to rely on traditional non-DCF techniques such Payback period ad ARR. While asking the reason for using traditional methods, the respondents expressed preference for these methods due their simplicity. They observed only 10% of the companies to use DCF techniques like NPV and IRR.

Dhankar R S (1995) made a study on a sample 75 Indian companies and investigated the methods used for incorporating risk in project appraisal. The researcher found that the firms used CAPM and Risk Adjusted Discounting rate as tools for handling risk in capital budgeting. The scholar also surveyed methods of making financial appraisal of investments; he found 33% of the firms to rely on traditional Payback and ARR. Only 16% firms were found to use DCF methods.

Babu C P and Sharma A (1995) conducted a study of 73 companies located around Delhi and Chandigarh to examine the techniques used for evaluating capital projects. They found increased percentage (73%) of the companies to use DCF technique in capital budgeting decisions. The responding companies used prime lending rate or WACC for discounting the inflows. The authors note that departments concerned prepared investment proposals; however, the final authority of deciding the investments was vested with other authorities like boards and committees. As tools to handle uncertainty the companies used sensitivity analysis as well as risk adjusted discounting rates.

Binder John JandChaput Scott J (1996), A positive analysis of corporate capital budgeting practices, Review of quantitative finance & accountancy, 6 (1996), pp. 245-257, in their article cost benefit analysis suggested that Discounting cash flow methods will be used more frequently for large projects.

Rao U (1996); Capital budget practices: A comparative study of India and select South East Asian Countries, ASCI Journal of Management, Volume 25, pp 30-46, survey of 74 Indian Companies revealed that 51% use IRR as project appraisal criterion. Firms typically use (92% or more) multiple evaluation methods. ARR and PBP are widely used as supplementary decision criteria.

Gitman et al. (2015) define capital budgeting as the process of evaluating and selecting long term investment consistent with the firm owners' goal of wealth maximization.
The selection of capital budgeting techniques can be influenced by both the financial and nonfinancial factors. Katabi and Dimoso (2016) conducted a study in Tanzania and found that business-related factors like industry of the business, sales growth, business establishment, number of employees and form of business play a vital role for selecting capital budgeting methods. Leon et al. (2008) found eight factors that motivate them to choose a capital budgeting method in Indonesian's firm. Factors are chief financial officers' education, size of the firm, total annual investment, industry type, ownership structure, multinational culture and financial leverage.

3. Data and methodology

Need of the Study:
Capital budgeting is important because it creates the accountability and the measurability. Capital budgeting deals with high volume production keeping in view the quality of products produced. Through the analysis of capital budgeting we can know the demand so that production and sales can be taken up without delay.
Scope of the Study:
The study was conducted to analyze capital budgeting of SME in India. The analysis is done to suggest the possible solutions. The techniques used were Internal Rate of Return (IRR), Net Present Value (NPV), Return on Investment (ROI), Profitability Index (PI), Pay-Back Period (PBP). A research study will be useful to a large spectrum of people managing small business firms, financial students, academicians and others in learning and understanding the financial management practices of the SME's in uttar Pradesh and India, and the innovative means to maintain the accounts.

Objective of the study:
(1) To examine the extent of usage of capital budgeting techniques in Indian small and medium sized enterprises (SMEs).
(2) To identify the factors influencing on the choice of capital budgeting techniques in SMEs.
(3) Methods of capital budgeting used for evaluating an investment proposal in India

Statement of the Research Problem:
Present research paper is focused on different capital budgeting techniques in SME's as small and Medium Enterprises have been globally recognized as vital components of a domestic economy and major contributors to employment generation in a country, regardless of global barriers. SME's for the lifeblood of any vibrant economy. In an emerging economy like India, SMEs have a significant socio-economic role to ensure overall development of the nation. Innovativeness alone does not guarantee success in the business world. A successful company also needs business competence, such as the ability to identify and make use of innovative business opportunities in a profitable way. The innovative growth of sales and business success should not be confused with each other, but examined simultaneously. Business success includes profitability, liquidity and/or solvency.

Source of Data Collection:
For the present study both Primary and secondary data shall be collected as follows:
• **Primary Data –** Questionnaire
• **Secondary Data -** Through published reports, journals, publications, articles, internet, emails etc. Due to qualitative nature of the study, it is assumed that besides the questions included in the schedule, online databases, and internet, annual reports of company /stores and company websites will act as secondary data sources in the research.

Significance of the Study:
The research will provide the new insights for new resources the businesses and the modern techniques which will be helpful for the small and medium enterprise businesses in uttar pradesh to take any decision for capital budgeting and performance budgeting. To tent the

significance between capital budgeting and performance budgeting will be applied. It will solve the problems for existing as well as for upcoming small and medium enterprise businesses in the area of capital budgeting performance budgeting so that the objectives can be met within the stipulated time.

HYPOTHESES OF THE STUDY

The following null hypotheses were framed and tested:

Ho: The size of a company's capital budget does not affect the selection of capital budgeting technique including risk techniques.

Ho1: The education of CEO does not affect the selection of capital budgeting method including risk techniques.

Ho2: The age of the company does not affect the selection of capital budgeting method including risk techniques.

4. Methodology and Results

Maharashtra, Tamil Nadu, and Uttar Pradesh collectively contribute nearly 40 per cent of all registered **micro, small, and medium enterprises (MSMEs)** in India, per a CBRE-CREDAI report. As of December 2023, there are over 3 crore MSMEs registered in the country, according to government data.

The area of this study are the manufacturing small and medium sized enterprises operated in big state of India.

The research sought to gather both quantitative and qualitative data relating to capital budgeting practices in India. Data was obtained through a survey of registered businesses ranging from small to medium businesses. A convenience sample was used. Managers who were responsible for capital budgeting decisions were targeted. In order to achieve this, a total of 300 managers from the province's different types of businesses ranging from small to medium and large were targeted as potential respondents. These were selected randomly from the directory of businesses in India. The directory contains a list of registered businesses in the province, their location and contact details. The respondents were selected randomly from small, medium and large businesses Listed on the directory. Due to the nature of capital budgeting practice, the research focused primarily on managers whose mandate included executing capital budgeting decisions in their businesses. In this regard, the survey sought to gather data on the experiences of the decision makers and the day-to-day practice associated with capital budgeting. The population was defined as those businesses that were located in the uttar pradesh, hydrabad particularly within the Agra, lucknow area. A pilot testing of the original survey interview schedule was first administered to ten managers across the three types of businesses that were studied before being fully utilized with the target respondents. The aim of pilot testing was to clarify and to check the relevance of some questions before interviewing. The informed responses gathered from the pilot survey were incorporated into the final version that was used to conduct the interviews with those managers who agreed to become respondents. A descriptive approach to the research finding was adopted. This was augmented by the chi square test technique that was used to measure association between variables. Quantitative analysis of the data obtained was carried out using SPSS software. The qualitative issues raised during the research are incorporated in explaining associations and other relationships that were suggested by the research findings. Out of the 300-targeted interviews, a total of 100 interviews were successfully conducted. This gives a response rate of 34 %. The following section, gives a detailed analysis of the research finding on capital budget practices in the India.

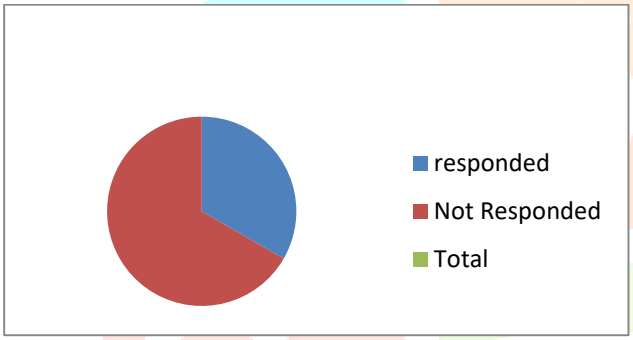
The following section discusses the main findings and results of the survey on capital budgeting techniques used in the uttar Pradesh area.

4.1. Business Size and Sector

The respondents were classified according to two criteria, according to business size and according to the sector the business operated under. The research utilized the 2023 Department of Trade and Industry (DTI) definition to classify businesses into small, medium and large business. The DTI defines small businesses as

those comprising of 5-50 employees, medium businesses as those comprising of 51-100 employees and large businesses as those comprising more than 100 employees.
The size of sample taken for the above study was 300 companies covering a broad cross-section of various size-groups, industry–groups, age-groups, ownerships and various geographical areas. These companies covered big cities like Hyderabad Delhi, Mumbai, Calcutta, Chennai, Bangalore, Ludhiana, Uttar Pradesh etc.

The structured questionnaire included closed ended questions regarding use of discounted/non-discounted and risk adjusted techniques of capital budgeting, and the cost of capital on the Likert scale of 1 to 5. The questionnaire prepared was finally put on a website so that it could be filled online and directly submitted to the investigator.
An attachment file of the copy of questionnaire was also sent along with covering letter CFO/Finance Manager/Director Finance of nearly 300 companies, so that in
case the respondent has problem in accessing the web link, he/she can download the questionnaire from the file attached. From these 300 mails sent, 75 companies
responded. Subsequently the questionnaire was re-mailed for follow up in order to maximize the response rate. It was indicated to the CFOs that the individual responses would be kept strictly confidential and only aggregate generalizations would be published. On repeated mails 15 more companies responded taking total usable responses to 100.



The detailed description of the sample characteristics is discussed in Table 1 below:

Classification of Sampled Companies on Basis of Size of Capital Budget
Table-4. 1

Size of Capital Budget (In Rs.)	**No. of Companies**	**%Age of Companies**
<10 million	30	30
10-99 million	25	25
100-499 million	18	22
500-999 million	14	14
> 1 Billion	13	13
Total	100	100.00%

Table **4.2. Position in the Firm:**

Position	Frequency	Percentage
Chief Finance Officer	55	55%
Investments Manager	27	27%
Other	18	18%
Total	100	100%

The study further inquired into the position held by the officers responding in the study. From the findings, majority of the respondents (55%) worked as Chief Finance Officer while 27% worked as investments managers. 18% held other positions in the organization including accountants, and portfolio managers. These findings indicate that the respondents were more reliable as they had financial management background which is important in capital budgeting process in an organization.

Table 4.3 Years Worked in the Firm

Years	Frequency	Percentage
Below 5	30	30%
6 to 10	21	21%
11 to 15	35	35%
above 16	14	14%
Total	100	100%

The study requesting the respondents to indicate the period they had worked with their respective firms. From the findings, majority of the respondents, 35% had worked with the current organizations for a period of 11 to 15 years followed by 30 % who had worked for below 5 years. 21% of the respondents had worked with their current organizations for a period of 6 to 10 years while 14% had worked with their current organizations for above 16 years. These findings show that the respondents had worked with their respective organizations for a long period of time to understand the capital budgeting procedures and how they functioned. This means that the data is more reliable as they clearly understood the capital budgeting processes and methods adopted by their respective firms.

Table 4.4: Educational Level

Educational level	Frequency	Percentage
PhD	7	7%
Masters	46	36%
Undergraduate	20	20%
College/diploma	23	23%
Other	4	4%
Total	100	100%

The study posted further asked the respondents to indicate their highest educational level attained. The findings, majority (46%) of the respondents had acquired masters as their highest educational level, 20% had undergraduates‟ degree, 7% had attained PhD while only 23% had diploma as their highest educational level. There were also a 4% of the respondents who had attained other educational levels. These findings indicate that the respondents were well learned on financial management aspects including capital budgeting processes and methods hence well suited to provide data for this study.

Table 4.5: Capital budgeting process

Availability of a Defined Process during Capital Budgeting

Response	Frequency	Percentage
Yes	100	100%
No	0	0%
Total	100	100%

The respondents were required to indicate whether there was a defined process to be followed during capital budgeting in their organization. The findings showed that all firms had a defined process for their organization to follow during capital budgeting. This is illustrated by 100% agreement among the respondents of their being a defined process for capital budgeting processes.

Table 4.6: Effect of adherence to capital budgeting process on investment rate.

Extent	Frequency	Percentage
Very great extent	31	31%
Great extent	35	35%
Moderate extent	24	24%
To a little extent	5	5%
To no extent	5	5%
Total	100	100%

The study further sought to find out the extent to which adherence of capital budgeting process affected the rate of investment in the organization. From the research findings, all the respondents agreed that adherence to capital budgeting process does affect the rate of investment in the organization. From the findings in the table 4.6, majority of the respondents 31 % agreed to a great extent that the adherence to capital budgeting process affect the rate of investment in the organization, 35%, to a very great extent, 24 % to moderate extent and 5 % to a little extent. The results are as in the table 4.6.

Table 4.7: Capital Budgeting Techniques:

Technique	Frequency	Percentage
Payback Period Method	22	22%
Accounting/Average Rate-of-Return	34	34%
Discounted Payback	37	37%
Present- Value	36	36%
Net Present Value	43	43 %
Internal Rate of Return	62	62%
Profitability index	32	32%

The research study sought to find out the capital budgeting techniques that the respondents utilizes in their organization. The researcher proposed a list of the budgeting techniques from which the respondents were required to indicate the extent to which they utilized them in their organization. From the findings, all the proposed capital budgeting techniques were utilized in the organization. However, some were used more than others. From the table 4.7 the most utilized capital budgeting method was internal rate of return as supported by the highest frequency of 62(62 %) of the respondents, followed by net present value technique at 43 (43 %) of the respondents. Discounted payback technique was third at 37 (37 %) of the respondents, Present- Value technique used by 36% , Average Rate of Return technique utilized by 34 %, Profitable Index technique utilized by 32 %. From the findings, many organizations utilized internal rate of return and net present value while the least utilized techniques were payback methods.

Table 4.8: Reasons for Limited Application of some Techniques:

Reason	Frequency	Percentage
Lack of familiarity	15	15%
Failure to take into account time value of money	61	61%
Cumbersome computations involved	14	14%
Limited staff, time and experience	8	8%
Other	2	2%

The study further sought to establish from the respondents the reasons as to why some of the techniques were not utilized in their organizations or were least used. From the findings, the respondents identified failure to take into account time value of money as they key reason for not applying some techniques followed by lack of familiarity with the technique at 61 %, Cumbersome computations involved at 14% and other reasons at 2 %. These findings indicate that different techniques are not applied by some organizations because of some reasons.

5. Conclusion

The study established that the companies had a clearly defined process governing the capital budgeting. Capital budgeting decisions in the organization were guided by corporate strategic plan. Strategic plans provide the vision and mission of what the organization aims to achieve and how it aims to achieve them. Adherence to authorization process prior to project kick off ensured that only value adding projects were undertaken. A variety of investment opportunities were identified in advance in the organization which means that the organizations identified several investment opportunities for evaluation in order to determine which ones bore high returns for the company. The organizations collected relevant and detailed information on each investment opportunity presented to them.

The study recommended that capital budgeting is a key process in an organization's development plan which needs to be handled with strict care because of the impact it has on the future of the organization. Through capital budgeting processes, the scarce resources of an organization are committed into projects hoping that the projects will earn substantial return for the shareholders.

The study established that all the capital budgeting techniques were applied among the firms. However, internal rate of return and net present value methods were dominant among the firms. This was largely because it took into account the time value of money and was easy to compute. However, there are different scenarios when some projects are undertaken even if they did not meet the set criteria. This was majorly for some foreseen reason like an organization intending to diversify its risks. This study therefore recommends that project appraisal managers borrow from experience to improve the predictability of Future cash flows and reduce the effects of uncertainty.

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